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PATENT

Attorney Reference Number 4239-50420
Application Number 09/125,635

**Marked-up Version of Amended Claims
Pursuant to 37 C.F.R. §§ 1.121(b)-(c)**

12. (Twice Amended) [A substantially pure] An isolated AIB1 polypeptide comprising SEQ ID NO: 8[, or a conservative variant thereof], wherein the polypeptide acts as a co-activator of [a steroid hormone] an estrogen receptor.

13. (Twice Amended) The isolated polypeptide of claim 12, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4 or a conservative variant thereof, wherein the polypeptide acts as a co-activator of the estrogen receptor.

14. (Reiterated) A method of identifying a candidate compound which inhibits estrogen receptor (ER)-dependent transcription comprising
contacting the compound with the AIB1 polypeptide of claim 12 and
determining whether the compound binds to the polypeptide,
wherein binding of the compound to the polypeptide indicates that the compound inhibits ER-dependent transcription.

15. (Amended) The method of claim 14, wherein the AIB1 polypeptide comprises [a Per/Amt/Sim (PAS) domain] an amino acid sequence as set forth as SEQ ID NO: 2.

16. (Amended) The method of claim 14, wherein the AIB1 polypeptide comprises [a basic helix-loop-helix (bHLH) domain] an amino acid sequence as set forth as SEQ ID NO: 3.

Please cancel claim 17.

18. (Amended) A method of identifying a candidate compound which inhibits [ER] estrogen receptor-dependent transcription comprising:

contacting the AIB1 polypeptide of claim 12 and an [ER] estrogen receptor polypeptide with the compound and

determining the ability of the compound to interfere with the binding of the [ER] estrogen receptor polypeptide with the AIB1 polypeptide,

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wherein interference of the binding of the estrogen receptor polypeptide and the AIB1 polypeptide indicates the compound inhibits estrogen receptor dependent transcription.

19. (Amended) The method of claim 18, wherein the AIB polypeptide further comprises SEQ ID NO: 2 or a conservative variant thereof.

20. (Reiterated) The method of claim 18, wherein the AIB polypeptide further comprises SEQ ID NO: 3 or a conservative variant thereof.

Please cancel claims 21-54, without prejudice.

55. (Twice Amended) [A substantially pure] An isolated DNA comprising a sequence encoding a AIB1 polypeptide comprising SEQ ID NO: 8, [or a conservative variant thereof,] wherein the polypeptide acts as co-activator of [a steroid hormone] an estrogen receptor.

56. (Twice Amended) The isolated DNA of claim 55, wherein the AIB1 polypeptide is a human AIB1 polypeptide.

57. (Twice Amended) The isolated DNA of claim 55, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4.

58. (Twice Amended) The isolated DNA of claim 55, wherein the polypeptide further comprises the amino acid sequence of SEQ ID NO: 2.

59. (Twice Amended) The isolated DNA of claim 55, wherein the AIB1 polypeptide further comprises the amino acid sequence of SEQ ID NO: 3.

Please cancel claim 60.

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61. (Twice Amended) The isolated DNA of claim 55 comprising a polynucleotide which hybridizes [at] under high stringency conditions to a DNA having the sequence of SEQ ID NO: 1, or the complement thereof, wherein the polynucleotide has at least 90% sequence identity to SEQ ID NO: 1.

62. (Twice Amended) The isolated DNA of claim 55 comprising a polynucleotide sequence having at least 90% sequence identity to SEQ ID NO: 1.

63. (Twice Amended) The isolated DNA of claim 55 comprising (a) the sequence of SEQ ID NO: 1 or (b) a degenerate variant thereof.

64. (Twice Amended) The isolated DNA of claim 55, operably linked to a promoter.

65. (Amended) [A] An isolated host cell comprising the DNA of claim 55.

66. (Amended) [A] An isolated polypeptide comprising SEQ ID NO: 2 or a conservative variant thereof.

67. (Amended) [A] An isolated polypeptide comprising SEQ ID NO: 3 or a conservative variant thereof

68. (Amended) [A] An isolated polynucleotide having at least 75% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of [a steroid hormone] an estrogen receptor.

69. (Amended) [A] An isolated polynucleotide having at least 90% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of [a steroid hormone] an estrogen receptor.

Please add the following new claims:

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--70. (New) The isolated polypeptide of claim 12, wherein the polypeptide further comprises SEQ ID NO: 2.

71. (New) The isolated polypeptide of claim 12, wherein the polypeptide further comprises SEQ ID NO: 3.

72. (New) The isolated polypeptide of claim 70, wherein the polypeptide further comprises SEQ ID NO: 3.

73. (New) The isolated polypeptide of claim 12, wherein the polypeptide comprises SEQ ID NO: 4.

74. (New) An isolated polypeptide fragment of SEQ ID NO: 4, wherein the polypeptide fragment binds the estrogen receptor.

75. (New) An isolated polypeptide fragment of SEQ ID NO: 4 encoding an antigenic epitope, wherein antibodies that bind SEQ ID NO: 4 bind the polypeptide fragment.

76. (New) An isolated nucleic acid sequence encoding the polypeptide of claim 74.

77. (New) An isolated nucleic acid sequence encoding the polypeptide of claim 75.

78. (New) An isolated nucleic acid sequence encoding the polypeptide of claim 73.

79. (New) The isolated nucleic acid encoding the of claim 62, wherein the nucleic acid comprises a sequence set forth as SEQ ID NO: 1.

80. (New) The isolated polypeptide of claim 12, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4 or a conservative variant thereof, wherein the polypeptide specifically binds an estrogen receptor.

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81. (New) An isolated polynucleotide comprising a sequence set forth as SEQ ID NO: 1, a degenerate variant thereof, or the complement thereof.

82. (New) An isolated polynucleotide comprising a fragment of SEQ ID NO: 1 or the complement thereof of sufficient length to hybridize to SEQ ID NO: 1 or the complement thereof.

83. (New) The isolated polynucleotide of claim 69, wherein the polynucleotide has at least 95% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of an estrogen receptor.

84. (New) The isolated polynucleotide of claim 69, wherein the polynucleotide has at least 98% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of an estrogen receptor.

85. (New) An isolated polypeptide encoded by the polynucleotide of claim 83.

86. (New) An isolated polypeptide encoded by the polynucleotide of claim 84.

87. (New) The isolated DNA of claim 61, wherein high stringency conditions comprise hybridization at about 42 °C and about 50% formamide, a first wash at 65 °C, about 2X SSC and 1% SDS; followed by a second wash at about 65 °C and about 0.1 X SSC.--

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